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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,982	12/28/2001	Yasuhiro Asawa	1217.003USQ	2498

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EXAMINER

THORNTON, YVETTE C

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,982

Applicant(s)

ASAWA ET AL.

Examiner

Yvette C. Thornton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-34 and 42-54 is/are pending in the application.
- 4a) Of the above claim(s) 42-46 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34 and 51-54 is/are allowed.
- 6) ☒ Claim(s) 1-15, 19-27, 30-33 is/are rejected.
- 7) ☒ Claim(s) 17, 18, 28, 29 and 47-50 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This is written in reference to application number 10/034982 filed on December 28, 2001 and published as US 2002/0160299 A1 on October 31, 2002 and is a CIP of US 6,506,536 B2.

Response to Amendment

1. Claims 16 and 35-41 have been cancelled. Claims 1-15, 17-34 and 42-54 are currently pending. Claims 42-46 have been withdrawn from consideration pursuant to the restriction requirement set forth in paper 09082003.
2. The cancellation of claim 16 is sufficient to overcome the claim objection set forth in the previous office action.

Priority

Acknowledgment is made of applicant's desire to revoke the priority claim to the PCT application PCT/US01/32120, published as WO 200253626 on December 10, 2003.

3. The examiner notes the claim of domestic priority to U.S. Application Number 09/751,650 now U.S. Patent Number 6,506,536. The examiner has failed to find support for a bottom layer comprising a thermally sensitive supramolecular polymer, as set forth in the instant claims, in the specification of the parent application.

Therefore, the effective filing date for the instant application is December 28, 2001.

See MPEP 2133.01.

Claim Interpretations

4. The examiner has interpreted claims 2-16 and 32-33 as not requiring the presence of a centered H-bond. Independent claim 1 discloses that the top layer comprising (a) a first thermally imageable composition comprising a first thermally sensitive supramolecular polymer or (b) a thermally imageable composition free of the

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said thermally sensitive supramolecular polymer. Therefore when the top layer is selected from (b) a thermally imageable composition free of the said thermally sensitive supramolecular polymer, the limitations of claims 2-16 are met.

5. *The following rejections are based on this interpretation of the claims.*

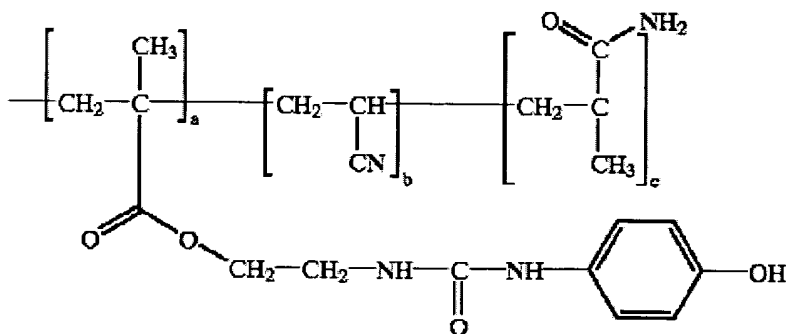
Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-15, 19-27, 30 and 32-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Patel et al. (US 6352811 B1). Patel exemplifies a two layer imageable element wherein the first layer was prepared by dissolving acrylic resin AR-6, ADS-830 IR dye and Victoria Blue BO indicator dye into 2-methoxyethanol (see ex. 12). The resin AR-6 has the structure:



(c. 15, l. 29-45).

The said solution is spin coated onto a grained and anodized aluminum substrate to produce a uniform coating. The resulting coated substrate was over-coated with a solution of 1% toluene solution of Acryloid A-21 (a poly (methyl methacrylate) solution) by spin coating. The resultant 2-layer plate was laser imaged on a Creo Trendsetter exposure device (ex. 11-12, c. 23, l. 45-c. 24, l. 23). It is the examiner's position that the first monomer of resin AR-6 meets the limitations of the last formula of instant claim 25 wherein R4 is an alkyl having 2 carbon atom. The acrylonitrile and methacrylamide monomers both meet the limitations of an ethylenically unsaturated monomer as set forth in instant claims 26 and 27. The ADS-830 IR dye meets the limitations of a photothermal converter material as set forth in instant claim 30. The overcoat layer of poly (methyl methacrylate) meets the limitations of a top layer that is thermally imageable and free of the claimed thermally sensitive supramolecular polymer (i.e., claimed component b). The resin AR-6 readily has a H-bond within the urea linkage. Patel teaches that the OH group of the taught resin forms hydrogen bonding with Victoria Blue BO (c. 6, l. 49-65), thereby meeting the limitations of having two centered H-bond units.

8. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (US 6352811 B1) as applied to claims 1-15, 19-27, 30 and 32-33 above, and further in view of Eames (US 3,962,513 A). Patel, as discussed above, teaches all the limitations of the instant claims except if fails to teach the use of a novolak resin in the top layer as set forth in instant claim 31. Patel does however teach that the second layer of the composite structure contains as an essential ingredient a polymeric material that is ink-receptive and soluble in an organic solvent. The said second layer may also contain a dye or pigment. When the first layer contains a photothermal conversion material, the second layer may also contain a photothermal conversion material, which typically is the same IR absorbing dye, which is used in the first layer. Suitable examples of the taught polymer material include polymethylmethacrylate, polystyrene, polyester, polyamide, polyurea and nitrocellulose (c. 9, l. 38-61). It is the examiner's position that one of ordinary skill in the art would have been motivated by the teachings of Patel to use any material which is ink-receptive and soluble in an organic solvent in the second layer of Patel. It is well known and conventional in the art, as supported by the prior art teachings of Eames (c. 2, l. 40-53), that novolak

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resins, polystyrene resins and poly (meth) acrylate resins are ink receptive or oleophilic resins which are used conventionally used in the lithographic art. One of ordinary skill in the art would have been motivated by what is well known and conventional in the lithographic art to substitute a novolak resin for the taught poly (methyl methacrylate) resin of example 12 of Patel and expect reasonably similar results. One of ordinary skill in the art would also have been motivated by the teachings of Patel (c. 9, l. 51-59) to incorporate the same IR absorbing dye used in the first layer of example 12 into the second layer of example 12.

Response to Arguments

11. Applicant's arguments filed May 20, 2004 have been fully considered but they are not persuasive. Applicants argue that the taught resin AR-6 of Patel fails to meet the limitations of a supramolecular polymer as set forth in the instant claims. The examiner maintains the position that the first monomer of resin AR-6 meets the limitations of the last formula of instant claim 25 wherein R4 is an alkyl having 2 carbon atom. The acrylonitrile and methacrylamide monomers both meet the limitations of an ethylenically unsaturated monomer as set forth in instant claims 26 and 27. Applicants argue that such a combination fails to meet the limitations of the instant claims. The examiner is of the position that such a combination would inherently meet the limitation of the instant claims because they are identical to the compounds presented in instant claims 25, 26 and 27. The applicant has offered no evidence that a polymer formed from the taught components would function any differently than the claimed invention. The claims as written do not require any additional components to make it "supramolecular".

12. The rejection of record is maintained.

Allowable Subject Matter

13. Claims 17-18, 28-29 and 47-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter: review of the prior art failed to teach and/or suggest the limitations of instant claims 17-18, 28-29 and 47-50.

15. Claims 34 and 51-54 are allowed.

16. The following is an examiner's statement of reasons for allowance: review of the prior art failed to teach and/or suggest an element wherein the top and bottom layer both comprise a thermally imageable composition comprising a thermally sensitive supramolecular polymer having at least one covalently bonded unit and at least one thermally reversible non-covalently bonded units which include two or more centered H-bond within each non-covalently bonded unit.

17. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 571-272-1336. The examiner can normally be reached on Monday-Thursday 8-6:30.

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19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Yvette Clarke Thornton
Primary Examiner
Art Unit 1752

yct
August 7, 2004